



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/828,979	04/21/2004	Patrick A. Hellandbrand JR.	ARF2004-004	6916

26353 7590 02/11/2005

WESTINGHOUSE ELECTRIC COMPANY, LLC  
P.O. BOX 355  
PITTSBURGH, PA 15230-0355

EXAMINER

BEHREND, HARVEY E

ART UNIT PAPER NUMBER

3641

DATE MAILED: 02/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/828,979

Applicant(s)

HELLANDBRAND ET AL.

Examiner

Harvey E. Behrend

Art Unit

3641

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 11/17/04.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 1-10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 4/21/04
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

Art Unit: 3641

1. Applicants election without traverse in the 11/17/04 response, of Group III (claims 11-15) is acknowledged.

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 11-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims are vague, indefinite and incomplete, particularly as to what all is meant by and is encompassed by the term or phrase, "means being structured to be sandwiched between...". It is not clear from the actual claim language, if the means actually is sandwiched between the guide tube and the lower nozzle or, if it simply has the capability of being so sandwiched (it is noted also in this same respect that the claims do not recite that the lower ends of the guide tubes extend into or are positioned in, passageways in the lower nozzle). This same issue can be found in claim 12 in regard to the terms or phrases "being structured to receive" and, "being structured to permit passage". The metes and bounds of the claims are hence undefined.

The claims are vague, indefinite and incomplete as to what all is meant by and is encompassed by the term or phrase "fashioned lower ends". Note for example that merely cutting a length of tube so as to provide a lower end, can be considered as "fashioning" a lower end (which is something neither contemplated nor disclosed as part of the invention). The metes and bounds of the claims are hence undefined.

The claims do not provide proper antecedent basis for all terms present, see for example, the terms, "a lower nozzle" and "a fuel cell" in lines 11, 12 of claim 11, "the bolt or screw" in line 7 of claim 12, "the mechanical fastener" in claim 15.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 3641

6. Claims 11-15 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Patterson et al.

Patterson et al show the actual structure being claimed. Note for example, Fig. 3 which shows a tube-shaped means or sleeve 36 welded or brazed to lower spacer grid 24. Sleeve 36 has an inwardly directed lip through which screw 38 can pass. Plug 40 is pressed into and welded to the lower end of guide tube 18 and hence, is an integral part of guide tube 18. This lower part of guide tube 18 rests on the inwardly directed lip of sleeve 36 as shown in Fig. 3. Note that said Fig. 3 thus shows sleeve 36 as sandwiched between lower nozzle 14 and guide tube 18, all is indicated in applicants claims.

Additionally, it is pointed out that applicants claims do not define over the structure, illustrated for example, in either Figs. 10 or 12 of Patterson et al.

This is because the claims are directed to a fuel assembly per se, such as a fuel assembly sitting on a shelf. Said fuel assembly is inherently capable of being placed on said shelf with either end on top (indeed, any fuel assembly is inherently capable of being placed in a nuclear reactor in a "right side" up position or, in an inverted position, either deliberately or through error).

Thus, applicants claims read on said Figs. 10 or 12 of Patterson et al with the fuel assembly of Patterson et al being in an inverted or upside-down position.

The claimed internally projecting retention lip of claim 12 reads on the inwardly directed portion of budge or protrusion means 64 (Fig. 10) which is engaged by a

Art Unit: 3641

corresponding shaped means of guide tube 18 and which prevents passage there-through of guide tube 18.

7. The other references cited further illustrate pertinent art. Note for example, the teachings of a sleeve means for attaching the lowermost spacer grid to the lower nozzle in each of Schallenberger et al (I), Yamada et al, Hatfield, Nunokawa et al, Johansson, John, Jr., et al, Bryan, Lechercq. Jones in Fig. 5 shows it is known to have the guide tube extend into a hole or passageway in a nozzle plate and be held on an inwardly directed lip of a sleeve means 37, 38 which is sandwiched between the guide tube and the nozzle plate.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Harvey Behrend whose telephone number is (703) 305-1831. The examiner can normally be reached on Tuesday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone, can be reached on (703) 306-4198. The fax phone number for the organization where this application or proceeding is assigned is (703) 306-4195.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-1113.



HARVEY E. BEHREND  
PRIMARY EXAMINER